DOCUMENT RESUME

ED 079 509 VT 020 641

AUTHOR	Ristau, Robert A.
TITLE	An Evaluation of the Educational Telephone Network (ETN) as an Instructional Delivery System for a Graduate Course in Career Education.
INSTITUTION	Wisconsin Univ., Madison. Center for Studies in Vocational and Technical Education.
REPORT NO	CSVTE-73-2
PUB DATE	1 Mar 73
NOTE	25p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Career Education; Chief Administrators; Course Evaluation; Educational Facilities; *Extension Education; *Facility Utilization Research; *Graduate Study; Instructional Media; Secondary School Counselors; Secondary School Teachers; *University Extension
IDENTIFIERS	*Educational Telephone Network; ETN; Wisconsin

ABSTRACT

This report describes a program of extension classes which enrolled 164 teachers, administrators, and counselors from Wisconsin schools for a University of Wisconsin graduate extension course. Professional advancement and assistance in developing career educational programs were the primary objectives of most of the enrollees. During the fall semester the course was taught using the Educational Telephone Network (ETN) statewide facilities with interface sessions which brought several local ETN groups together for the ETN class presentation and discussion throughout the semester. In rating the course, nearly half the students evaluated it as equal to or better than the traditionally taught extension courses. The quality of work the students accomplished appeared to be excellent and objective examinations indicated a good overall level of achievement. The career education opinionnaire, administered twice to all enrollees, indicated significant favorable shifts of attitudes toward, and knowledge of career education as well as better understanding of their roles in its programs. Recommendations based on these data were made that the ETN facilities be used throughout the State and be improved qualitatively and quantitatively for that purpose, and that local group leaders be provided with special training to enhance their effectiveness. (Author/MU)

FILMED FROM BEST AVAILABLE COPY

ED 079509

CSVTE 73-2

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

AN EVALUATION OF THE EDUCATIONAL TELEPHONE NETWORK (ETN) AS AN INSTRUCTIONAL DELIVERY SYSTEM FOR A GRADUATE COURSE IN CAREER EDUCATION

A Report of the Center for Studies in Vocational and Technical Education

by Robert A. Ristau
Associate Director
Center for Studies in Vocational and Technical Education
University of Wisconsin-Madison

March 1, 1973

VT020 641

TABLE OF CONTENTS

		Page
I.	Introduction	1
	A. Background Information	1
	B. Evaluation Rationale and Procedures	2
	C. Validation of Instruments	3
	D. Local Group Leaders and Course Materials	4
	E. Resource People	5
II.	The Clientele	5
III.	Course Evaluation by Enrollees	9
	A. Scope of Evaluation	9
	B. Evaluation of Course Content	9
	C. The ETN as an Instructional Medium	10
	D. Instructional Aids	11
	E. Students Involvement	12
	F. Other	13
IV.	Course Evaluation by Directors of Study	14
V.	The Summative Evaluation	15
VI.	General Observations by Instructor	16
VII.	Unsolicited Comments by Students	17
VIII.	Attitudinal Changes Among Enrollees	19
IX.	Conclusions	21
X.	Recommendations	22

I. INTRODUCTION

A. Background Information

During the fall semester of the 1972-73 school year, a three-credit course entitled "Career Education--Grades 7-12" was taught using the Educational Telephone Network (ETN) statewide facilities. The course was approved by the Department of Curriculum and Instruction (C & I) as a University Extension offering under the designation "C & I 272-630, Workshop in School Program Improvement."

Seventeen ETN locations were preselected by the Center for Extension Programs in Education and approved by the C & I faculty. A list of the ETN locations appears as Appendix A.

Interface sessions, which brought several local ETN groups together for the ETN class presentation and a post-class discussion with the instructor, were held throughout the semester. Each student was scheduled to be involved in at least two interface sessions.

The instructor, Dr. Robert A. Ristau, developed the course and conducted the evaluation as part of his activities in the Center for Studies in Vocational and Technical Education. Although employed full-time as the Associate Director of the Center, Dr. Ristau also has an appointment as a lecturer in the Department of Curriculum and Instruction. His previous involvement in state and national career education activities influenced his selection for this assignment.

Valuable assistance was provided by an advisory committee, a project assistant, and several consultants. The advisory committee included representatives of school districts involved in career education, members of the state education agencies, and teacher education personnel from the Madison Campus. A roster of the advisory committee appears as Appendix B. The advisory committee met on several occasions to help formulate the content of the course as well as to help shape the evaluation.

Assistance in the development and teaching of the course as well as the design and conduct of the evaluation was provided by Mr. J. Patrick Wagner, a Ph.D. candidate in Education Administration. Mr. Wagner's background included a key role in the development of several career education projects in the state of Wisconsin. He also served on

a state study committee which developed The Wisconsin Guide for Integrating Career Development Into K-12 Curriculum, a guide which is used as a primary basis for career education development in Wisconsin.

Consultants employed to help develop the course syllabus were Mr. Robert Meyer, Career Education Coordinator for the Wisconsin Department of Public Instruction and Mr. Harry N. Drier, Jr., Career Education Staff Specialist, The Ohio State University. Mr. Drier is in charge of the staff development program of the National School-Based Career Education Model. Mr. Meyer and Mr. Drier developed specific aspects of the course under the direction of Dr. Ristau.

Career education is conceptualized as an educational program which will have considerable impact on the total school curriculum. The decision to offer this course with a focus on that portion of career education relating to grades 7-12 was based in part on the expertise and experience of the instructor as well as a desire to establish some parameters for course activities during its initial offering.

The ETN facilities have been used with apparent success by several University of Wisconsin faculty members. The instructor of this course has enjoyed a close working relationship with Dr. Harland Samson who has taught courses utilizing the ETN facilities over the past several years. In addition, Dr. Burton Kreitlow shared his teaching experiences utilizing the ETN facilities. The instructor had previous experience with the use of the ETN facilities in conducting in-service programs for Local Vocational Education Coordinators (LVEC's) while he served as the Director of the Bureau for Career and Manpower Development for the Wisconsin Department of Public Instruction. It appeared, however, that questions raised concerning the desirability of the ETN network as a delivery system for graduate level course offerings were such that this experiment should be systematically evaluated.

B. Evaluation Rationale and Procedures

The design of the evaluation attempted to analyze student reaction to the format and content of the course as well as the experience of learning via ETN. The nature of the evaluation, then, was both formative and summative. To the extent that it would be possible to do so,

changes in attitudes and perceived behaviors were measured. The following were utilized as part of the attempt to accomplish the desired evaluation:

1. A weekly feedback form by those persons who were in charge of each local ETN group. This response form reported the local group leader's perception of a group's reaction and response to each ETN session. The local group leaders also rated the ETN in terms of its effectiveness as a delivery system. See Appendix C for a copy of the feedback form.

2. An instrument identified as "Evaluation Form A" was designed to solicit responses from selected students at periodic intervals throughout the course. Evaluation Form A (see Appendix D) was administered at the conclusion of 8 ETN sessions; namely, sessions 3, 4, 5, 6, 10, 11, 12, and 13. Local group leaders administered the evaluation instrument and mailed the answer sheets back to the Center. Responses were electronically processed by the Wisconsin Testing Service with data subsequently provided to the instructor and project assistant for analysis. A complete schedule of the evaluation activities conducted at various ETN sessions appears as Appendix E.

3. The summative evaluation was accomplished with an instrument entitled "Evaluation Form B." (See Appendix F.) The advisory committee provided a substantial input into the content of this instrument which was administered to all students at the final class session.

4. An opinionnaire was developed for use in this course. The opinionnaire was designed to determine basic attitudes and perceptions of career education and was administered as a pre-test and post-test instrument. Students responses were recorded on electronic scoring sheets and tabulated by the Wisconsin Testing Service.

C. Validation of the Instruments

The opinionnaire was developed with the assistance of the two consultants. Opinionnaires developed under research conditions by other universities and school districts were used to formulate a shortened form. Items which appeared to be discriminating were used in the construction of this opinionnaire. Some items unique to the needs of this

evaluation were also included.

Most of the questions included on the evaluation forms were selected from a bank of items made available through the offices of Mr. Lorne Parker, Associate Director of the Controlled Communications Systems. Known as the Mermac program, these items had been tested and validated and were of the forced-choice variety. Several questions and concerns identified by the advisory committee also were included.

D. Local Group Leaders and Course Materials

Students at an ETN location were under the supervision and leadership of a local group leader who was referred to as a "director of study." The directors of study were selected by the instructor based in part on their individual involvement in career education and their demonstrated ability in teaching and leadership. All directors of study met with the instructor, the project assistant, and representatives of the ETN Division at an in-service session conducted in Madison prior to the beginning of the course. In addition, the instructor had frequent contacts with them including individual conferences during the semester.

Materials used in the course included a syllabus which identified a topic, student-centered objectives, inquiry questions, and required readings for each session. A Book of Readings, developed by the instructor, the project assistant, and one of the consultants, presented scholarly papers as required readings for each topic. In addition, a comprehensive bibliography of over 200 references in career education available through the Center was compiled and made available to all students.

The University Extension Library distributed a set of reading materials to each director of study. The books provided at each ETN location contained supplementary readings for the enrolled students.

Career Education, Perspective and Promise, by Keith Goldhammer and Robert Taylor was selected as the required textbook. Dr. Goldhammer is Dean of the School of Education, Michigan State University, and Dr. Taylor is the Director of the Center for Vocational and Technical Education at the Ohio State University. The textbook was selected from among several that were reviewed. It appeared to be the most scholarly in its presentation and one which would challenge students to think about critical

philosophical as well as practical aspects of career education.

Other appropriate materials were mimeographed and made available to students during the semester. Several resource persons provided papers or materials which supplemented their presentation. An example is a twenty-two-page paper on the Comprehensive School-Based Career Education Model prepared by Mr. Harry Drier.

E. Resource People

A unique and valuable aspect in the utilization of the ETN facilities as an instructional delivery system is the capability of acquiring resource people who can be plugged in to the ETN network. In keeping with the instructor's perception of this as an important feature, 13 resource persons were utilized. Resource persons spoke with students via long-distance telephone or from various ETN locations around the state. A list of resource persons utilized, and the area of their expertise, is shown in Appendix H.

II. THE CLIENTELE

A demographic questionnaire (see Appendix I) was used to obtain data on students enrolled. The information was used to help guide the nature of the instruction during the semester as well as to provide data for evaluation purposes.

A total of 174 students enrolled. Of the initial enrollees, five dropped the course within the first few weeks and five enrolled as audits. Of the 164 who enrolled for credit, only five chose undergraduate credit.

The demographic questionnaire was administered during the second class session. A total of 163 students completed the form. An analysis of data revealed that a majority of those enrolled were teachers with the next largest group being counselors. (See Table I.) Almost three-fourths of those enrolled were employed in grades 9-12. Three elementary teachers were among the enrollees. (See Table II.) Almost half of the students enrolled indicated vocational education as their area of speciality, with approximately one-fourth indicating general counseling as their area of speciality and approximately one-fifth indicating academic subjects as their area of speciality. (See Table III.)

TABLE I

NUMBER AND PERCENT OF ENROLLEES IN VARIOUS EDUCATIONAL ROLES

EDUCATIONAL ROLE	N	%
Principal	4	3
Counselor	37	23
Teacher	90	55
LVEC	17	10
Assistant Principals	5	3
Other Administrators	10	6
Other	0	0
Total	163	100

TABLE II

NUMBER AND PERCENT OF ENROLLEES WHO WORK AT VARIOUS GRADE LEVELS

GRADE LEVEL	N	%
Seventh	3	2
Eighth	7	4
Ninth	6	4
Tenth	13	8
Eleventh	8	5
Twelfth	30	18
High School	59	36
Junior High School	13	8
Junior & Senior High School	11	7
K-12 Administrators	10	6
Elementary	3	2
Other	0	0
Total	163	100

TABLE III

NUMBER AND PERCENT OF ENROLLEES DESIGNATING AREAS AS THEIR SPECIALTIES

AREA	N	%
Academic	30	18
Vocational	76	47
General Counseling	37	23
Administration	9	6
Curriculum	4	2
Other Specialities (Speech, etc.)	7	4
Total	163	100

TABLE IV

INDICATED REASONS FOR ENROLLING IN THE COURSE

REASONS	N	%
General Interest	23	14
Graduate Program	13	8
Professional Advancement	66	41
Development of Career Education Programs	10	6
LVEC Certification	3	2
Other	0	0
No Response	48	29
Total	163	100

A majority of the students enrolled express professional advancement or general interest in career education as the principal reason for taking the course. (See Table IV.) Almost all enrolled students indicated some familiarity with career education with a very small number indicating a great deal of understanding of career education. (See Table V.)

TABLE V

INDICATED DEGREE OF UNDERSTANDING OF CAREER EDUCATION BY STUDENTS AT THE BEGINNING OF THE COURSE

DEGREE OF UNDERSTANDING OF CAREER EDUCATION	N	%
None	6	4
Little	39	23
Some	112	69
Great	6	4
Total	163	100

The majority of the students indicated as their highest expectation priority that of learning what they could do as individuals in a career education program. There also was an expressed desire to develop a better understanding of career education concepts. (See Table VI.)

TABLE VI

EXPRESSED EXPECTATIONS OF STUDENTS

HIGHEST PRIORITY EXPECTATION HELD FOR THE CLASS	N	%
Better Understanding of Career Education Concepts	48	29
Learn What I Can Do for Career Education	95	58
Learn What Others Are Doing for Career Education	8	5
Learn About Design and Implementation of Career Education	4	3
Others	2	1
No Response	6	4
Total	163	100

Other data collected indicated that the range of experience in education was from 0 to 21 years. Respondents averaged seven years in classroom teaching, five years in guidance and counseling, and four years in administration.

Respondents identified professional journals, fellow teachers, and the Department of Public Instruction as their major sources of information on career education. Only 13% indicated the state university system as the major source of such information, and 4% saw workshops as providing such information for them.

In summary, the course appeared to attract a variety of teachers, counselors, and administrators. It appears to the evaluator that the 163 students enrolled represented a cross section of personnel in education as well as a variety of school districts throughout Wisconsin.

III. COURSE EVALUATION BY ENROLLEES

A. Scope of Evaluation

An examination of Evaluation Form A shows that 30 response items were provided. Responses were obtained from students at ETN stations on a rotating system based on a predetermined schedule. Each student did not evaluate each session to avoid the possibility of overexposure to the evaluation instruments and process. A summary of responses by students to each of the questions is presented in Appendix J.

The primary value of this phase of the evaluation was formative, and it guided teaching/learning activity during the semester. A large volume of data resulted from the administration of this instrument; only selected items are presented in the body of this report.

B. Evaluation of Course Content

Students consistently indicated that the content as presented in the sessions evaluated was adequately discussed. (See Table VII.) An exception is noted with respect to session six. Seventy-two percent of

the respondents indicated a disagree or strongly disagree response to the content and discussion for that particular session. Upon examination of other data provided by this instrument, it was noted that the majority of respondents also felt that for session six the subject matter was not adequately presented, they did not feel encouraged to take an active part in the program, and the program was not well paced within the allotted time. There was further expression that more time should have been devoted to outside resource people in session six. The general response to course content, however, was positive and appeared to be appropriate for the students enrolled.

TABLE VII

"THE CONTENT PRESENTED WAS ADEQUATELY DISCUSSED."[1]

SESSION	N	Percent Responding SA	A	D	SD
3	28	14.3	46.4	35.7	3.6
4	37	24.3	54.1	21.6	0.0
5	22	0.0	86.4	13.6	0.0
6	18	0.0	27.8	66.7	5.6
10	41	22.0	63.4	14.6	0.0
11	17	17.6	76.5	5.9	0.0
12	34	11.5	82.6	5.9	0.0
13	37	24.3	70.3	5.4	0.0

C. The ETN as an Instructional Medium

The majority of the students consistently indicated in response to question five that the Educational Telephone Network was adequate for communicating the subject matter. (See Table VIII.) The strongly agree and agree responses ranged from a total of 77% to 56%. Strongly disagree responses ranged from 0% to 14%.

[1]Responses to question 1, Evaluation Form A

TABLE VIII

"THE EDUCATIONAL TELEPHONE NETWORK (ETN) SEEMED TO BE ADEQUATE FOR COMMUNICATING THE TYPE OF SUBJECT MATTER PRESENTED."[2]

SESSION	N	Percent Responding SA	A	D	SD
3	28	7.1	53.6	25.0	14.3
4	37	32.4	54.1	10.8	2.7
5	22	36.4	36.4	18.2	9.1
6	18	5.6	50.0	38.9	5.6
10	41	14.6	41.5	36.6	7.3
11	17	23.5	41.2	35.3	0.0
12	34	14.7	58.0	23.5	2.0
13	37	8.1	56.8	27.0	8.1

In response to question nine, a substantial majority of students consistently rated the mechanical quality of the ETN as satisfactory. For sessions 11 and 13, 100% of the respondents answered strongly agree or agree on this point.

The physical setting of the ETN locations was observed by the instructor to be a problem in some areas. However, in response to question 14, students indicated that the physical setting of their ETN location was conducive to good learning. The highest total of strongly agree and agree responses was 100% for session 11 and the low was 65% for session 3.

D. Instructional Aids

Students consistently indicated that required readings contributed to their understandings of the lessons. The summary of responses to question 17 is shown in Table IX.

The Book of Readings provided was consistently rated higher than the textbook readings; however, both rated high. An instructional

[2]Responses to question 5, Evaluation Form A

technique which provided for a critique and an ETN-wide discussion of required readings was rated low by students. In several instances, a majority of students disagreed or strongly disagreed that the class exercise of critiquing the required readings was meaningful. Subsequently, the critique of required readings exercise was discontinued.

TABLE IX

"THE REQUIRED READING ASSIGNMENTS CONTRIBUTED TO MY UNDERSTANDING OF THE TOPICS IN THIS LESSON."[3]

SESSION	N	Percent Responding SA	A	D	SD
3	28	39.3	53.6	7.1	0.0
4	37	21.6	59.5	16.2	0.0
5	22	31.8	63.6	4.5	0.0
6	18	16.7	72.2	11.1	0.0
10	41	34.1	63.4	2.4	0.0
11	17	52.9	47.1	0.0	0.0
12	34	38.2	55.8	5.9	0.0
13	37	16.2	73.0	10.8	0.0

A total of 69 colored slides were developed for use during the ETN classes. Charts, diagrams, and other significant visuals were included in the slide presentations. Slides were shown in each ETN location on cue from the instructor. Students generally indicated that the visual materials helped clarity points being made in the presentation. Those ETN sessions which elicited a low agreement response were those in which few or no visuals were used. When used, responses to visuals were consistently high.

E. Students Involvement

One of the expressed concerns with respect to the utilization of

[3]Response to question 17, Evaluation Form A

the ETN facility is the extent to which students would take an active part in the class activity. In response to question eight, a majority of students consistently indicated they felt encouraged to take an active part. Responses ranged from a high of 82% of strongly agree and agree responses (Session 11) to a low of 33% of strongly agree and agree responses (Session 6). (See Table X.)

TABLE X

"I FELT ENCOURAGED TO TAKE AN ACTIVE PART IN THE PROGRAM."[4]

SESSION	N	Percent Responding SA	A	D	SD
3	28	0.0	64.3	28.6	7.1
4	37	24.3	48.6	21.6	5.4
5	22	4.5	63.6	31.8	0.0
6	18	0.0	33.3	55.6	11.1
10	41	4.9	56.1	31.7	7.3
11	17	29.4	52.9	17.6	0.0
12	34	5.9	53.8	31.5	8.7
13	37	13.5	59.5	24.3	2.7

A majority of students for every ETN session indicated that the question-and-answer session was beneficial to them. Responses to this question ranged from a high of 92% of strongly agree and agree answers (Session 12) to a low of 60% of strongly agree and agree responses (Session 3).

F. Other

There was a general expression of disagreement with the following two questions: "Too much material was presented within the short period

[4]Responses to question 8, Evaluation Form A

of time" and "I had questions but I did not have the opportunity to ask them." The negative responses to those questions indicate that students generally felt that the material presented was adequate for the time period provided. Expressed feeling that adequate time was provided for students to ask questions further reflects a satisfaction with involvement in class sessions.

More than 90% of the students for each session indicated a strongly agree or agree answer to the question "The director of study with the group created a warm, friendly atmosphere conducive to learning." There was a very high degree of consensus that the instructor showed respect for differing viewpoints expressed by students and that he allowed for alternatives to the solutions of problems.

IV. COURSE EVALUATION BY DIRECTORS OF STUDY

As previously noted, directors of study used feedback forms to provide a weekly response to the ETN sessions. Their evaluation of the general effectiveness of the ETN sessions tended to increase as the semester progressed. Session 2 was rated lowest with a quantified rating of 3.20. Sessions 12 and 13 were rated highest with quantified ratings of 4.17 and 4.20 respectively. A summary of evaluations by directors of study is shown in Appendix K.

In rating their group's response to individual sessions, directors of study again showed a general trend toward greater effectiveness as the semester moved along. Sessions 13 and 8 both earned a quantified socre of 4.0.

The rating of the ETN as a delivery system was consistently high in this phase of the evaluation. Quantified scores of 4.0 or more were indicated for sessions 6, 7, 9, 10, and 12. The ETN as an instructional delivery system was perceived to be very acceptable by the directors of study.

A valuable aspect of the evaluation was the narrative comments provided by the directors of study. Many suggestions relative to the conduct of the class were received. Some opinions expressed were contrary to those held by the instructor; each was given serious consideration.

Expressed desires for less theoretical and more pragmatic discussions were received; the course needed to have both emphases. Suggestions that class sessions should be more instructor-centered were accommodated as the semester progressed. The close interaction of the directors of study and the instructor was seen as an important part of the semester's activity.

V. THE SUMMATIVE EVALUATION

This instrument was administered to the total ETN class at the last class session. A total of 159 answer sheets were received and processed by the Wisconsin Testing Service. An analysis of the data follows.

In rating this course in comparison with traditionally taught Extension courses, 45% of the students rated this course as about the same, better, or superior. Fifteen percent had not taken other Extension courses, and 3% omitted this question. Thirty percent felt the course was not as good and 6% felt it to be quite inferior.

Sixty-five percent of the students indicated that they would again enroll in this course as presented this semester, and 34% indicated that they would not. Twenty-six percent of those responding "no" (about 14 students) indicated that they were dissatisfied with the ETN system.

Respondents generally indicated that the individual student project, the Book of Readings, and the ETN local group discussions were the most helpful activities in the course.

Seventy-seven percent of the respondents indicated that they felt that the University of Wisconsin should offer other graduate courses using ETN facilities. Twenty percent indicated that they did not feel that way, and 2% omitted the question.

Providing facilities which would better accommodate local discussion and group interaction at the ETN location and including more telephones for group use were the most frequently indicated as desired improvements in ETN facilities.

Eighty-seven percent of the respondents perceived a personal, positive change of attitude towards career education as a result of the

course. Eighty-eight percent also indicated a perceived personal behavior change with respect to directing or influencing student learning activities as a result of taking this course. Although such responses are only one indicator of change, the high degree of positive responses to those questions appears to be significant.

In ranking the best features of the course, the students indicated the amount and variety of information provided on career education as being the best feature. The instructor, guest lectures by resource people, the readings, and local group discussions were ranked in that order as the next best features of the course.

Seventy-nine percent of the respondents indicated that the class sessions were more meaningful when the instructor was present. Eighteen percent felt that they were not more meaningful, and 1% were unsure.

Eighty-one percent of the respondents indicated that resources which they required were available. Additional resources which were suggested by some respondents included improved library facilities and more copies of the Wisconsin Career Development Guide. However, only 16% of the respondents felt that they lacked the resources needed.

Fifty-three percent of the respondents indicated that they would be more likely to enroll in an on-campus course as a result of having participated in this ETN offering through the Extension Division.

A complete summary of the responses to Evaluation Form B is presented in Appendix M.

VI. GENERAL OBSERVATIONS BY INSTRUCTOR

Although personal contacts with students were infrequent compared with traditional on-campus courses, considerable feedback and interaction did take place. Letters, phone calls, and a special communication device developed for this course (an ETN-O-GRAM) provided a pleasant flow of communication with those involved in the course. The utilization of local group leaders who interacted frequently with the instructor seemed to enhance the effectiveness of the course.

The quality of work which was done by the students was excellent.

Objective examinations administered to measure mastery of cognitive learning indicated a bell-shaped curve among the total class population. No one ETN location had any disproportionate number of high or low grades. The overall level of achievement appeared to be good.

Projects developed were conceived to accommodate unique needs of the individuals enrolled. The completed projects appear to at least equal the quality of those done by students in on-campus courses. (Copies of all projects are on file in the Center; a partial listing of projects appears as Appendix N.)

In the meetings held with local ETN groups, a generally consistent comment expressed by students was that the ETN learning experience was a very acceptable alternative. The first choice, that of having a regular class with the instructor present each time, was seen as desirable but not always practical. Students generally expressed pleasure at having the opportunity to enroll in a graduate course of this nature and saw the ETN as a viable instructional delivery system.

VII. UNSOLICITED COMMENTS BY STUDENTS

A variety of unsolicited comments and reactions were received from students. Sixteen students wrote notes or letters in which they expressed pleasure with the course. Some of those comments are presented in the following paragraphs.

"I enjoyed your class. Would rather have had a face-to-face situation, but I understand. Please keep me in mind if you start anything on campus this summer. Thanks so much for your time."

"I would like to commend you for the caliber of the course you taught. It has helped me a great deal in my situation. One suggestion I have would be to eliminate much of the on-the-air discussion and replace it with meaningful resource speakers and your own comments. I would gladly participate in the discussion before or after the class and leave the air time for the above purposes."

"We wish to express our thanks and appreciation for your letter of November 21, 1972. Both of us have written several graduate course

papers, but this is the first time our instructor has taken the time and effort to write us regarding our paper and in such a way that indicates careful perusal of it . . . We intend to keep your letters with your suggestions, and if we are able to continue our study next year we'll certainly heed your suggestions as we proceed."

"I did enjoy the course. I hope someday to take a course from you on a face-to-face basis. There is room for much stimulating discussion about career education. It is good to see someone like you believe in a new educational philosophy. Too often educators will not take a strong stand on anything new. Thank you for your patience."

"Your course has been a rewarding experience; it certainly has changed my attitudes and has caused me to think a lot about the purposes of education."

"A personal remark about the course in career education. I feel that this course has opened a whole new outlook for me in approaching my students in a way in which I can really aid them to find their true worth as a whole person, even at the age where they are still trying to find themselves. I've searched for many years for this kind of an approach and have never really developed the idea, because I've never had the time or guidance to fulfill this desire. I do appreciate the course and the work that has gone into the preparation of the materials and generous offering of ideas and answers to many questions. I am sure that I will be able to make students aware of many new views on their path of discovery."

"It should be said that at the beginning of the course I was one of those who indicated that I knew a great deal about career education. It should now be said that as a matter of fact, I knew very little, even though I had participated in a two week in-service workshop. Your course has been a valuable experience and has opened many paths for examination and study. Thank you again for offering this course to us."

"I especially appreciate listening to the fine resource persons. Many of us classroom teachers do not get a chance to go to national conventions and meet famous people. Talking to them in this class was very meaningful."

The instructor was invited to visit a classroom in the Oconomowoc Junior High School to observe two of the teachers using a project which was developed in this course. The instructor also was invited to participate in in-service sessions at several schools represented in the class.

One student, several weeks after the course ended, wrote the following: "Although you rated our project as only being worth a B, I would like to indicate that it is a real smash hit here in our school district. The superintendent and the board of education have responded very positively to it. It is being used as a model for career education activity in our district. I believe that it will lead us into some desirable and meaningful activities. Thanks again for offering this course in our area. Too often those of us in this part of the state feel left out of programs offered by the University. Best wishes to you."

VIII. ATTITUDINAL CHANGES AMONG ENROLLEES

The career education opinionnaire was administered twice to all enrollees. The analysis of responses indicates several significant shifts with respect to attitudes and perceptions of career education. The most significant changes occurred with respect to familiarity with Wisconsin's 16 Career Development concepts. Other areas in which there were significant changes, based on a comparison of responses, was with respect to the perception of career education as being more than another name for vocational education and the perception that career education is for all students. There was also a strong feeling that teachers should learn techniques for developing local career education resource materials. Table XI lists points on which significant change occurred with respect to student attitudes and opinions.

A high degree of congruence with respect to eight statements on career education are presented in Table XII. The high degree of agreement on these eight basic statements is significant to the extent that these reflect important objectives and concepts inherent in career education.

TABLE XI

SIGNIFICANT[5] CHANGES IN RESPONSES TO CAREER EDUCATION'S OPINIONNAIRE BASED ON PRE-POST OPINIONNAIRE (N=163)

ITEM	DEGREE OF CHANGE IN PERCENTAGES	NATURE OF THE STATEMENT
#1	SA + 48, A + 11	Familiarity with Wisconsin's 16 Concepts
#3	SA + 12, A + 17	Need to learn techniques for developing local career education resource materials
#9	SA + 15	Career education is merging of general and vocational education
#12	SA + 15	Students career choice will affect future life style
#13	SD + 33	Career education is another name for vocational education
#15	SA + 15	Students should be made aware of employer expectation
#18	SA + 19	Teachers should know occupations requiring knowledge and skill of their subjects
#19	SA + 22	Students should make tentative career choices while in school
#22	SA + 24	Career education is for all students including going on to further education
#24	SA + 19	Public schools should provide placement services

[5] An increase of 15% or more Strongly Agree (SA) or Agree (A) in responses based on comparison of pre/post responses

TABLE XII

VERY HIGH AGREEMENT[6] ITEMS BASED ON POST-OPINIONNAIRE RESPONSES TO CAREER EDUCATION OPINIONNAIRE: (N=163)

ITEM	PERCENT RESPONDING STRONGLY AGREE	NATURE OF STATEMENT
#2	69	Students should learn how to get, hold and advance on a job
#5	73	Help students develop appreciation for all work
#8	70	Employment trends part of school program
#12	69	Career choice affects life style
#18	69	Teachers should know occupations
#22	81	Career education is for all students
#24	66	Schools should provide job placement services

IX. CONCLUSIONS

1. The ETN can be an effective instructional delivery system in serving students at the graduate level.

2. Students can be motivated to learn and achieve well using teaching techniques adapted to the ETN system.

3. Utilization of the ETN as an instructional delivery system places very heavy time demands upon the instructor, especially in terms of preparing written communications, organizing and developing materials, distributing class materials throughout the state, and traveling to ETN locations.

4. Instructors utilizing the ETN facilities should meet on a

[6] Responses of 67% or more - two-thirds of the respondents

face-to-fact basis with their students as frequently as possible.

5. A variety of communication devices should be utilized to encourage and facilitate two-way communication between the instructor and students with prompt and timely responses provided by the instructor.

6. The effective support and assistance of the staff of the ETN-SCA and the Center for Extension Programs in Education is an important part of the factors that lead to successful use of the ETN.

7. The use of outside resource people, particularly those with a national reputation, is a compensating factor helping to lead to favorable student reaction to the ETN.

8. Local group leaders are key persons in this system of teaching, especially in terms of enhancing desirable learning experiences at each ETN location.

9. Large numbers of students can be reached and served effectively by one instructor using ETN if proper support personnel and visual aids are provided; that is, a part-time secretary, a project assistant, and qualified local group leaders should be part of the instructional team.

10. Discussions among students at each ETN location should be encouraged and accommodated by making facilities available at the ETN site both prior to and following the ETN network presentations and discussions.

X. RECOMMENDATIONS

1. That the facilities of the Educational Telephone Network (ETN) be used as part of the University's attempt to reach and serve students throughout the state of Wisconsin.

2. That the facilities of the ETN in its various locations throughout the state be continually improved and upgraded to provide the most desirable learning situation possible in each locality. Specific recommendations would include the provision of movable desks or tables and chairs and a suitable classroom in which students can meet and discuss at least 15 minutes prior to each ETN program and 30 minutes following each program.

3. That some device other than the one telephone handset be provided to accommodate student questions and responses, especially where a local group exceeds four individuals.

4. That faculty members interested in upgrading the utilization of ETN as an instructional delivery system be provided with a conference or seminar in which the ETN capabilities can be presented and in which various utilization techniques can be discussed.

5. That local group leaders be provided with special training by the University to enhance their effectiveness in light of their key roles, and that they receive compensation commensurate with the importance of their roles based on further study of their roles and financial considerations. A concomitant consideration would be the establishment of departmentally approved clinical professorships of duly qualified personnel from local districts who would work with local groups under the supervision of the major professor. The major professor would maintain academic responsibility.